THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 14

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ROSAURO V. HOLGADO, RICHARD ADAMS
and CHAN TALATY

Appeal No. 1997-1556
Application 08/340,247[1]

ON BRIEF

Before McKELVEY, Senior Administrative Patent Judge, and SCHAFER and TORCZON, Administrative Patent Judges.

SCHAFER, Administrative Patent Judge.

MEMORANDUM OPINION AND ORDER

Decision on Appeal under 35 U.S.C. § 134

This appeal is from the rejection of claims 1-17. Claims 18-50 have been withdrawn from

[1] Application for patent filed November 16, 1994.

consideration as the result of the examiner's requirement to elect certain species. Thus, this appeal relates only to the claims representing the elected species, claims 1-17.

The examiner rejected the claims on two grounds:

1. Claims 1-7, 9, 10 and 13 under 35 U.S.C. § 103(a) as unpatentable over Kulazhanov[2] or Thornley[3] combined with Moreton[4] or Trivett.[5]

2. Claims 8, 11, 12 and 14-17 under 35 U.S.C. § 103(a) as unpatentable over the same combination of references combined with Perez,[6] Randell[7] or Stenmark.[8]

We reverse.

The claimed subject matter relates generally to hydraulic fluids said to have fire resistant properties. Claim 1, the sole independent claim on appeal, specifies a hydraulic fluid which is the mixture of at least two components: (1) a trialkoxyalkyl phosphate and (2) a natural triglyceride. Claim 1 reads:

> 1. A fire-resistant hydraulic fluid comprising a mixture of about 20-90% by weight of a trialkoxyalkylphosphate and about 10-80% by weight of a diluent comprising a natural triglyceride having a high flash point.

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[2] Soviet Union Patent 654,671. All references to this document are to the English language translation of record. The examiner's answer indicates that the publication date of this document is March, 1979. Paper 10, p. 3. However, the translation indicates that the publication date is not indicated. Applicants have not challenged either the public availability or the date of publication stated by the examiner. Possible arguments not raised in the brief are considered waived. See 37 CFR § 1.192(a), We therefore accept the date stated by the examiner as the publication date.

[3] United States Patent 2,796,400 issued June 18, 1957.

[4] United States Patent 2,934,501 issued April 26, 1960.

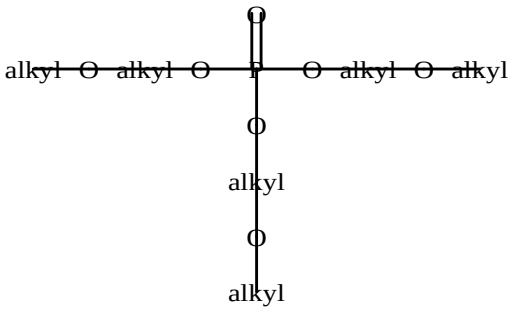
[5] United States Patent 5,372,736 issued December 13, 1994.

[6] United States Patent 5,236,610 issued August 17, 1993.

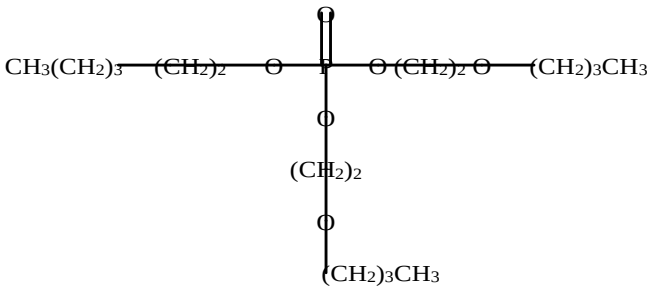
[7] United States Patent 4,163,731 issued August 7, 1979.

[8] PCT Application WO 88/05808 published August 11, 1988.

Trialkoxyalkyl phosphate is an phosphoric acid ester which may be represented by the following structural formula:



"Alkyl" represents a monovalent radical of the form C_nH_{2n+1}-. Butyl (n=4) and ethyl (n=2) are two examples. "P" represents phosphorus and "O" represents oxygen. Applicants' specification indicates that a preferred trialkoxyalkylphosphate is tributoxyethylphosphate. In the above formula, the end most alkyl radical in each branch is butyl and the interior alkyl is ethyl. The preferred compound can be depicted by the following structural formula:

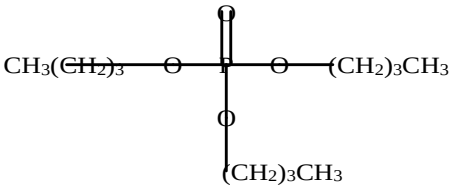


The hydraulic fluid also includes a "natural triglyceride" diluent. According to the specification, the natural triglyceride diluents include animal fats and vegetable oils:

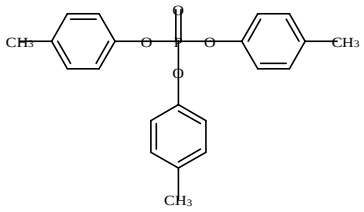
> Conventional animal fats and vegetable oils provide a convenient source for the natural triglyceride diluents useful in the invention. In a preferred embodiment, the vegetable oil is canola oil. Other suitable vegetable oils include corn oil, cottonseed oil, sunflower oil, peanut oil, soybean oil, coconut oil, Jojoba oil, castor oil, palm oil, and palm kernel oil. These natural triglycerides are readily available from commercial sources, including, for example, Calgene, Inc., Pfau, Inc., Acme Hardestry, Inc., and Resource Material Corp.

Specification, p. 7, lines 8-17(14).

Kulazhanov relates to hydraulic brake fluid including tributylphosphate and castor oil. The hydraulic fluid is described as containing 70-80% tributylphosphate and 20-30% castor oil. The reference also teaches that tricresylphosphate may replace part of the tributylphosphate. Tributylphosphate and tricresylphosphate are phosphoric acid esters which may be depicted by the following structural formulas:



Tributylphosphate



Tricresylphosphate

Neither of these compounds is a trialkoxyalkylphosphate. As indicated by applicants' specification castor oil is a natural triglyceride.

Thornley describes a lubricant composition which includes a mixture of a relatively non-volatile substantially neutral organic ester and castor oil. A variety of esters are specified for use in the composition. The preferred esters are aliphatic or cyclo-aliphatic alcohol esters of organic dicarboxylic acids rather than phosphoric acid esters. However, tricresyl phosphate is specifically described as a useful ester in the lubricant. The lubricant includes 10-90% castor oil and 90-10% ester.

The Moreton patent relates to fire-resistant hydraulic fluids and lubricants which include at least

three components: (1) a phosphoric acid ester (2) a halogenated hydrocarbon and (3) a viscosity index improver. Moreton teaches that the phosphoric acid esters include those having three organic radicals including the aryl radicals phenyl, cresyl or xylyl; alkyl radicals having 4-10 carbon atoms; and alkoxyalkyl radicals having 3-6 carbon atoms. Tricresyl phosphate, tributyl phosphate and butyoxyethyl phosphate are included in a long list of specific esters .

The Kulazhanov and Thornley compositions differ from the compositions of claim ? in that, neither Kulazhanov nor Thornley describe a composition including trialkoxyalkylphosphate. Noting this difference the examiner concluded:

> It would have been obvious to one of ordinary skill in the art to substitute the tributoxyethyl phosphate of Moreton for the tributyl phosphate of Kulazhanov et al or the tricresyl phosphate of Thornley because Moreton teaches the equivalence of each of these phosphate esters as major components in either a hydraulic fluid or a lubricant composition.

Paper 10, p. 5.

We do not understand what the examiner means by "equivalence of each of these phosphate esters as major components in either a hydraulic fluid or a lubricant composition." We assume that by "equivalence" the examiner means that the hypothetical person having ordinary skill in the art would recognize tricresyl phosphate, tributyl phosphate and tributoxyethyl phosphate to have similar properties and would behave similarly in similar environments. In any event, we do not believe that the evidence relied upon by the examiner creates a prima facie case of obviousness. "Where claimed subject matter has been rejected as obvious in view of a combination of prior art references, a proper analysis under § 103 requires, inter alia, consideration of two factors: (1) whether the prior art would have suggested to those of ordinary skill in the art that they should make the claimed composition or device, or carry out the claimed process; and (2) whether the prior art would also have revealed that in so making or carrying out, those of ordinary skill would have a reasonable expectation of success." In re Vaeck, 947 F.2d 488, 493, 20 USPQ2d 1438, 1442 (Fed. Cir. 1991); In re Dow Chemical Co., 837 F.2d 469, 473, 5 USPQ2d 1529,

1531 (Fed. Cir. 1988). In proceedings before the PTO the examiner has the burden of establishing the prima facie case of unpatentability. In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); In re Fritch, 972 F.2d 1260, 1265, 23 USPQ2d 1780, 1783 (Fed. Cir. 1992); In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984); In re Rhinehart, 531 F.2d 1048, 1052, 189 USPQ 143, 147 (CCPA 1976). To meet this burden, the examiner must present a factual basis supporting the conclusion that a prima facie case exists. In re Warner, 379 F.2d 1011, 1017, 154 USPQ 173, 178 (CCPA 1967); In re Lunsford, 357 F.2d 385, 392, 148 USPQ 721, 726 (CCPA 1966); In re Freed, 425 F.2d 785, 788, 165 USPQ 570, 572 (CCPA 1970).

First, the examiner has not explained why the person having ordinary skill in the art would be motivated to select a tributoxyethyl phosphate from the numerous phosphates disclosed by Moreton. Second, and we think more importantly in this case, the record does not establish that there would be a reasonable expectation of success in substituting tributoxyethyl phosphate for tributyl phosphate or tricresyl phosphate. To the extent Moreton teaches interchangeability of the various phosphates, it is with respect to compositions including substantial amounts of an aliphatic halogen. Moreton provides no guidance with respect to the compatibility of any of the phosphates with natural triglycerides. The examiner has not asserted and not provided any basis to hold that one having ordinary skill in the art would have recognized that tributoxyethyl phosphate is so structurally similar to tributyl phosphate or tricresyl phosphate that the properties of the former would be expected to be similar to the latter two phosphates. Based on the teachings of the references, we can not conclude that a person having ordinary skill in the art would have a reasonable expectation of success in substituting tributoxyethyl phosphate for the tributyl phosphate or tricresyl phosphate in the Kulazhanov and Thornley hydraulic fluids. In failing to demonstrate that the person of ordinary skill in the art would have been motivated to substitute tributoxyethyl phosphate and a reasonable expectation of success in making the substitution, the examiner has not met her burden of establishing the prima facie obviousness of the claimed subject matter.

The rejection of claim 1 is reversed. Since claims 2-17 depend directly or indirectly on claim 1, the rejections of those claims is also reversed.

REVERSED

	)
FRED E. McKELVEY, Senior	)
Administrative Patent Judge	)
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	)
	) BOARD OF PATENT
RICHARD E. SCHAFER	)
Administrative Patent Judge	) APPEALS AND
	)
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